

--19. (New) A superconducting cable comprising at least one layer of tapes of superconducting material circumferentially wound side by side on a support at a prefixed distance so that gaps are circumferentially formed between adjacent tapes, wherein a non-superconducting material is interposed between the adjacent tapes to partially fill the gaps.

20. (New) The superconducting cable according to claim 19 wherein the non-superconducting material comprises at least one of tapes and wires.

21. (New) The superconducting cable according to claim 19 wherein the non-superconducting material has a thickness differing from that of the tapes of the superconducting material of an amount not higher than one of +/-15%, +/-10%, and +/-5%.

22. (New) The superconducting cable according to claim 19 wherein the non-superconducting material has a thickness substantially equal to that of the tapes of the superconducting material.

23. (New) The superconducting cable according to claim 19 wherein the width of the non-superconducting material is such that a gap of one of 0.1-3 mm and 0.1-2 mm remains between one tape of superconducting material and the adjacent non-superconducting material.

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24. (New) The superconducting cable according to claim 19 wherein the non-superconducting material comprises at least one of plastic and metal.

25. (New) The superconducting cable according to claim 24 wherein the non-superconducting material has amagnetic characteristics at an operative temperature.

26. (New) The superconducting cable according to claim 24 wherein the metal comprises at least one of copper, silver, gold, copper alloy, silver alloy, and gold alloy.

27. (New) The superconducting cable according to claim 19 wherein the non-superconducting material is longitudinally wound on the support or on an underlying superconducting layer, and alternated with the tapes of superconducting material.

28. (New) The superconducting cable according to claim 19 wherein the superconducting cable is disposed within at least one of a current transmission network and a current distribution network.

29. (New) A superconducting cable comprising:
a phase conductor including at least a first layer of tapes of superconducting material circumferentially wound side by side on a support at a first prefixed distance so

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